SAFETY DATA SHEET
North American Version

SODIUM SULFITE - CATALYZED & DECHARACTERIZED

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Identification of the substance or mixture

Product name : SODIUM SULFITE - CATALYZED & DECHARACTERIZED
Structural formula Na2SO3

1.2. Use of the Substance/Mixture

Recommended use :
- Water treatment
- For further information, please contact: Supplier

1.3. Company/Undertaking Identification

Address : SOLVAY CHEMICALS, INC.
3333 RICHMOND AVENUE
HOUSTON TX 77098-3099
United States

1.4. Emergency and contact telephone numbers

Emergency telephone : **1 (800) 424-9300 CHEMTREC ® (USA & Canada)**
01-800-00-214-00 (MEX. REPUBLIC)

Contact telephone number (product information): : **US: +1-800-765-8292 (Product information)**
US: +1-713-525-6500 (Product information)

2. HAZARDS IDENTIFICATION

2.1. Emergency Overview:

NFPA : H= 2 F= 0 I= 1 S= None
HMIS : H= 2 F= 0 R= 1 PPE = Supplied by User; dependent on local conditions

General Information

Appearance : Free-flowing powder
Colour : Grey brown
Odour : Slight sulfur dioxide odor

Main effects

- Harmful if swallowed.
- Irritating to eyes.
- May cause sensitization by inhalation.
- Product contains a low concentration of cobalt sulfate, a known allergen and a possible carcinogen.
- Hazardous decomposition products formed under fire conditions.

2.2. Potential Health Effects:

Inhalation

- Mild respiratory irritant

SOLVAY Chemicals

SOLVAY

- May cause severe allergic respiratory reaction.
- Breathing of dust may aggravate asthma or other pulmonary diseases.
- Symptoms: Headache, Breathing difficulties, Cardiac irregularities, loss of consciousness and cardiopulmonary arrest.

Eye contact
- Moderate eye irritation

Skin contact
- slight irritation
- Prolonged skin contact may cause skin irritation.

Ingestion
- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
- Overexposure may result in death.
- Repeated contact may cause allergic reactions in very susceptible persons.
- Risk of violent reaction.

Other toxicity effects
- See section 11: Toxicological Information

2.3. Environmental Effects:
- See section 12: Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Sodium sulfite
CAS-No. : 7757-83-7
Concentration : **appr. 90.0 %**

Sodium Metabisulfite
CAS-No. : 7681-57-4
Concentration : **appr. 3.3 %**

Cobalt sulfate - Monohydrate
CAS-No. : 13455-34-0
Concentration : **appr. 0.1 %**

Lignosulfonic acid, sodium salt
CAS-No. : 8061-51-6
Concentration : **appr. 5.0 %**

4. FIRST AID MEASURES

4.1. Inhalation
- Call a doctor immediately if allergic signs, particularly in the respiratory tract, are observed.
- Oxygen or artificial respiration if needed.
- Remove to fresh air.

Exposure to decomposition products :
- If inhaled
- Remove to fresh air.
- Immediate medical attention is required.

4.2. Eye contact
- Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Immediate medical attention is required.

4.3. Skin contact

- Wash off with plenty of water.
- Wash contaminated clothing before reuse.
- If skin irritation persists, call a physician.

4.4. Ingestion

If victim is conscious:

- Immediate medical attention is required.

If victim is unconscious but breathing:

- Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

- Foam

5.2. Extinguishing media which shall not be used for safety reasons

- Water

5.3. Special exposure hazards in a fire

- Not combustible.
- Contact with water liberates hazardous gas.
- Sulphur dioxide

5.4. Hazardous decomposition products

- Sulphur dioxide
- Sulphur oxides

5.5. Special protective equipment for fire-fighters

- Wear self-contained breathing apparatus and protective suit.
- Use NIOSH approved respiratory protection.

5.6. Other information

- Approach from upwind.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

- Refer to protective measures listed in sections 7 and 8.
- Avoid dust formation.
- Keep away from water.

6.2. Environmental precautions

- Should not be released into the environment.
- The product should not be allowed to enter drains, water courses or the soil.
- In case of accidental release or spill, immediately notify the appropriate authorities if required by Federal, State/Provincial and local laws and regulations.

6.3. Methods for cleaning up

- Collect the product with suitable means.
- Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1. Handling

- Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Use only in well-ventilated areas.
- Avoid dust formation.
- Protect from moisture.
- Avoid prolonged or repeated contact with skin.

7.2. Storage

- Keep in a dry place.
- Keep container closed.
- Keep in properly labelled containers.
- Keep away from incompatible products

7.3. Other information

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- For personal protection see section 8.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limit Values

Sodium sulfite

- ACGIH: US. ACGIH Threshold Limit Values
  Remarks: none established

Sulphur dioxide

- ACGIH: US. ACGIH Threshold Limit Values 2009
  Short term exposure limit = 0.25 ppm
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006
  Permissible exposure limit = 5 ppm
  Permissible exposure limit = 13 mg/m3
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  time weighted average = 2 ppm
  time weighted average = 5 mg/m3
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  Short term exposure limit = 5 ppm
  Short term exposure limit = 13 mg/m3
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A 06 2008
  time weighted average = 2 ppm
  time weighted average = 5 mg/m3
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A 06 2008
  Short term exposure limit = 5 ppm
  Short term exposure limit = 10 mg/m3

Cobalt sulfate

- ACGIH: US. ACGIH Threshold Limit Values 2009
  time weighted average = 0.02 mg/m3
  Remarks: as Co

Particles not otherwise specified (PNOS)

- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006
  Permissible exposure limit = 5 mg/m3
  Remarks: respirable dust fraction, All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) 02 2006

Permissible exposure limit = 15 mg/m3
Remarks: Total dust, All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.

- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 15 millions of particles per cubic foot of air
  Remarks: respirable dust fraction
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 50 millions of particles per cubic foot of air
  Remarks: Total dust
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 5 mg/m3
  Remarks: respirable dust fraction
- US. OSHA Table Z-3 (29 CFR 1910.1000) 2000
  time weighted average = 15 mg/m3
  Remarks: Total dust
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  time weighted average = 5 mg/m3
  Remarks: respirable dust fraction
- US. OSHA Table Z-1-A (29 CFR 1910.1000) 1989
  time weighted average = 15 mg/m3
  Remarks: Total dust
- ACGIH: US. ACGIH Threshold Limit Values 2008
  time weighted average = 10 mg/m3
  Remarks: Inhalable particles.
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A 06 2008
  time weighted average = 15 mg/m3
  Remarks: Total dust
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A 06 2008
  time weighted average = 5 mg/m3
  Remarks: respirable dust fraction

ACGIH® and TLV® are registered trademarks of the American Conference of Governmental Industrial Hygienists.
SAEL = Solvay Acceptable Exposure Limit, Time Weighted Average for 8 hour workdays. No Specific TLV STEL (Short Term Exposure Level) has been set. Excursions in exposure level may exceed 3 times the TLV TWA for no more than a total of 30 minutes during a workday and under no circumstances should they exceed 5 times the TLV TWA.

8.2. Engineering controls

- Ensure adequate ventilation.
- Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

8.3. Personal protective equipment

8.3.1. Respiratory protection

- When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- In the case of vapour formation use a respirator with an approved filter.
- Use NIOSH approved respiratory protection.
- In the case of dust or aerosol formation use respirator with an approved filter.

8.3.2. Hand protection

- Protective gloves

8.3.3. Eye protection

- Chemical resistant goggles must be worn.

8.3.4. Skin and body protection

- Preventive skin protection

- Wear suitable protective clothing.

8.3.5. Hygiene measures

- Wash contaminated clothing before re-use.
- Eye wash bottle with pure water
- Use only in an area equipped with a safety shower.
- Handle in accordance with good industrial hygiene and safety practice.
- When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

Appearance	:	Free-flowing powder
Colour	:	Grey brown
Odour	:	Slight sulfur dioxide odor

9.2. Important health safety and environmental information

pH	:	8.0 - 8.4 *Concentration*: 10 g/l
Boiling point/boiling range	:	*Remarks*: not applicable
Flash point	:	*Remarks*: not applicable
Flammability	:	*Remarks*: The product is not flammable.
Explosive properties	:	*Explosion danger*: *Remarks*: not applicable
Oxidizing properties	:	*Remarks*: Non oxidizer
Vapour pressure	:	*Remarks*: no data available
Relative density / Density	:	2.6 2.6 g/cm3
Bulk density	: :	1,523 kg/m3 95 lb/ft3
Solubility	:	210 g/l *Temperature*: 36 °C (97 °F)
Partition coefficient: n-octanol/water	:	*log Pow*: -4 *Temperature*: 25 °C (77 °F)

9.3. Other data

Decomposition temperature	:	>= 150 °C (302 °F)

10. STABILITY AND REACTIVITY

10.1. Stability

- Stable under recommended storage conditions.

10.2. Conditions to avoid

- Heat.
- Exposure to moisture.
- Keep at temperature not exceeding: 150 °C (302 °F)

10.3. Materials to avoid

- Acids
- Oxidizing agents

10.4. Hazardous decomposition products

- Sulphur dioxide, Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Toxicological data

Acute oral toxicity

- LD50, mouse, 820 mg/kg
- LD50, rat, > 2,000 mg/kg

Skin irritation

- rabbit, No skin irritation

Eye irritation

- rabbit, Eye irritation

Sensitisation

- Human experience, Respiratory sensitization

Genetic toxicity in vitro

- In vitro tests showed mutagenic effects

Remarks

- Harmful if swallowed.
- Moderate eye irritation
- May cause sensitization of susceptible persons by inhalation of aerosol or dust.
- Product contains a low concentration of cobalt sulfate, a known allergen and a possible carcinogen.

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

- Carassius auratus (goldfish), LD 50, 96 h, 100 mg/l

12.2. Mobility

- Remarks: no data available

12.3. Persistence and degradability

Abiotic degradation

- Result: no data available

Biodegradation

- Biochemical Oxygen Demand (BOD)
  Remarks: instantaneous reaction

12.4. Bioaccumulative potential

- Result: Bioaccumulative potential

12.5. Other adverse effects

- no data available

12.6. Remarks

- oxygen scavenger
- Ecological injuries are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS

13.1. Waste from residues / unused products

- This substance is not listed in:
- US. EPA Resource Conservation and Recovery Act (RCRA) P List of Hazardous Wastes (40 CFR 261.33(e) and 40 CFR 302 [CERCLA])
- Respect local/federal and national regulations for:
- Hazardous waste
- Contact waste disposal services.

13.2. Packaging treatment

- To avoid treatments, as far as possible, use dedicated containers.
- Containers that cannot be cleaned must be treated as waste.
- In accordance with local and national regulations.

13.3. RCRA Hazardous Waste

- Listed RCRA Hazardous Waste (40 CFR 302) - No
- Unlisted RCRA Hazardous Waste (40 CFR 302) - No

14. TRANSPORT INFORMATION

- not regulated

15. REGULATORY INFORMATION

15.1. Inventory Information

Toxic Substance Control Act list (TSCA)	:	-	In compliance with inventory.
Australian Inventory of Chemical Substances (AICS)	:	-	In compliance with inventory.
Canadian Domestic Substances List (DSL)	:	-	In compliance with inventory.
Inventory of Existing Chemical Substances (China) (IECS)	:	-	In compliance with inventory.
Korean Existing Chemicals List (ECL)	:	-	In compliance with inventory.
EU list of existing chemical substances (EINECS)	:	-	In compliance with inventory.
Japanese Existing and New Chemical Substances (MITI List) (ENCS)	:	-	In compliance with inventory.
Philippine Inventory of Chemicals and Chemical Substances (PICCS)	:	-	In compliance with inventory.
New Zealand Inventory of	:	-	In compliance with inventory.

Chemicals (NZIOC)

15.2. Other regulations

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

- yes.

SARA Hazard Designation (SARA 311/312)

- Acute Health Hazard: Yes.
- Chronic Health Hazard: Yes.
- Reactivity Hazard: Yes.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- yes.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

- not regulated.

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

- yes.

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

- yes.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

- WARNING! This product contains a chemical known in the State of California to cause cancer..

15.3. Classification and labelling

Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2)

- D2B Toxic Material Causing Other Toxic Effects

Remarks: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

EC Label

- The product is classified in accordance with Annex VI to Directive 67/548/EEC.

Symbol(s)	Xn	Harmful
R-phrase(s)	R22	Harmful if swallowed.
	R36	Irritating to eyes.
	R42	May cause sensitization by inhalation.
S-phrase(s)	S22	Do not breathe dust.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

Ratings :

NFPA (National Fire Protection Association)
Health = 2 Flammability = 0 Instability = 1 Special =None

HMIS (Hazardous Material Information System)
Health = 2 Fire = 0 Reactivity = 1 PPE : Supplied by User; dependent on local conditions

Further information

- New (MSDS)
- Distribute new edition to clients

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of the company mentioned in section 1 in North America. If you are located in a country other than Canada, Mexico or the United States, please contact the Solvay Group company in your country for MSDS information applicable to your location. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product). To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither the company mentioned in section 1 nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes. The company mentioned in section 1 reserves the right to make additions, deletions or modifications to the information at any time without prior notification. Trademarks and/or other products of the company mentioned in section 1 referenced herein are either trademarks or registered trademarks of the company mentioned in section 1 or its affiliates, unless otherwise indicated.